

Ser. No. 10/081,120
Response to Office Action of December 16, 2003
Atty Docket 115699-11-CON

Remarks

1) Summary of Prosecution to Date

This letter is responsive to the Examiner's Office Action of December 16, 2003. At the time of that office action claims 1, 7, 13, 21, 24, 28, 29, 32 - 34, 41 - 54, and 57 - 83 were pending in the case. The Office Action indicated that

- (a) Claims 28, 29, 32 - 34 and 41 - 44 are allowed;
- (b) Claims 4, 5, 7, 14 - 19, 62, 65 and 73 - 77 are objected to, but would be allowed if re-written in independent form;
- (c) Claims 14 - 17 are rejected under 35 USC 112;
- (d) Claims 1, 2, 6, 7, 13, 46 - 47, 58, 66 - 68 and 72 are rejected under 35 USC 102 (b) as being anticipated by US Patent 3,371,622 of Lich;
- (e) Claims 14, 15 and 17 are rejected under 35 USC 103 as being unpatentable over Lich in view of US Patent 2,865,306 of Bock et al.
- (f) Claims 48, 49, 51 - 52, 79, and 81 - 83 are rejected under 35 USC 103 as being obvious given US Patent 3,371,622 of Lich in view of US Patent 5,622,115 of Ehrlich et al.
- (g) Claims 57, 59, 69 - 71 and 83 are rejected under 35 USC 103 given Lich in view of Bock et al.
- (h) Claims 60, 61, 63 and 64 are rejected under 35 USC 103 given Lich and Bock et al., as cited above, and further in view of Ehrlich et al.,
- (i) Claim 54 is rejected under 35 USC 103 given Lich in view of Biegel.

In addition, the Examiner has noted inconsistency in terminology in claim 66.

2) Formalities Under 35 USC 112

Claims 66 and 69

The applicant has amended claim 66 to delete the word "first" in lines 8 and 10 as suggested by the Examiner. In consequence of this amendment, claim 69 for consistency.

Claim 14

The Examiner has queried the relationship of the "third of said rail car trucks", and its relationship to the second of the rail car trucks.

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The applicant agrees that the language of the claim may be somewhat detailed. However, if read slowly while looking at a sketch, the applicant respectfully submits that the claim is not confusing, and is correctly worded. To that end, the applicant has provided an illustration, labelled "Sketch No. 1", in which the various claim elements are labelled for the Examiner's convenience.

In the event that Sketch No. 1 is insufficient to clarify the issue, the applicant requests that the Examiner call the applicant's agent by telephone for the purpose of removing any misunderstanding about the structure of the claim language.

3) 35 U.S.C. 102 – Test for Anticipation

In the interest of brevity, the applicant hereby repeats, and incorporates by reference the statements of the law of anticipation made in the response to office action submitted on November 12, 2003 in this matter.

4) 35 U.S.C. 103 - Obviousness

In the interest of brevity, the applicant hereby repeats, and incorporates by reference the statements of the law concerning rejections for obviousness under 35 USC 103 made in the response to office action submitted on November 12, 2003 in this matter.

5) Application of Law to Rejections

The applicant notes that all of the outstanding rejections in this case, whether made under 35 USC 102 or 35 USC 103 rely upon Lich as the sole reference (in the case of 35 USC 102) or the principle reference (in the case of 35 USC 103).

In each case, the lynch pin of the rejections, figuratively speaking, is an interpretation of Lich as:

"...including at least first and second railcar units (1,3) connected at a cantilevered articulation (done by pin 55), said rail car trucks including a first rail car truck (8) being pivotally mounted to said first rail car unit (1), said articulation connection (55) being longitudinally eccentrically mounted relative to said first truck (1) as shown in fig. 5; and said articulation connection being operable to pass a vertical shear load from said second rail unit (3) to said first rail car unit (1) since no other structure exists underneath the end of rail car 3 to carry the vertical

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shear load from rail car 3 to rail car 1 other than the articulation connection 55." (Emphasis added).

The applicant disagrees.

(i) " ... *said articulation connection being operable to pass a vertical shear load ...*"

First, the applicant respectfully submits that "said articulation connection 55" is not operable to pass a vertical shear load between the units. To aid in understanding this point, the applicant has provided herewith an illustration identified as "Sketch No. 2", based on Figure 5 of Lich.

If we accept as a proposition that the weight of one end of Lich unit 3 is borne, ultimately, by truck 8, and if we accept the proposition that "no other structure exists" by which this can be done, then it follows that the vertical shear must somehow be carried from the body of unit 3 into horizontal pin 43 and thence into drawbar 41. The far end of drawbar 41 is formed into a clevis 45 that seats about an eye 49 of an eye connector 47. The clevis 45 and the eye 49 are interlinked by a pin 51.

The applicant respectfully submits that if a vertical shear load, 'V', were to be introduced at horizontal pin 43, then, for that shear to be transmitted to truck 8, shear load 'V' would also have to be carried through pin 53, as would a bending moment, 'M', equal to the product of 'V' taken over the length 'L' between the centers of pins 43 and 53. However, pin 53 acts as a hinge. It has no apparent ability to resist a moment about its axis.

It is axiomatic that hinge pins tend to be used where the designer does not want a moment to be transferred, i.e., to give a rotational degree of freedom about the axis of the pin. Where parallel pins are used at opposite ends of a linking member, it may often be inferred that the designer intended the linking member to work as a strut in either tension or compression. (Indeed, often times a reasonable person skilled in the art might consider the very use of the term "draw bar" to be a fair indication that the designer expected the part to function in tension - i.e., as a draw bar).

That being the case, the applicant respectfully submits, that pin 53 is not able to transmit the bending moment 'M', and hence is unable to carry the vertical shear 'V' into eye connector 47.

In the event that the Examiner proposes to maintain the rejection of claim 1, or indeed, of any of the presently rejected claims on the basis of Lich, then the applicant respectfully requests that

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the Examiner explain (a) where the foregoing argument has gone astray; and (b), in that event, how the vertical shear is passed through pins 43 and 53, and draw bar 41.

(ii) *"...since no other structure exists underneath the end of rail car 3 to carry the vertical shear load from rail car 3 to rail car 1"*

Again, the applicant disagrees.

Lich shows, and even claims as his invention (see Lich, claim 1), "links depending from the truck supported end of said first underframe adjacent the side thereof" (namely, items 35, Lich Fig. 4) and "elements on the adjacent end of said second underframe adjacent the sides thereof (namely items 33, Lich Fig. 4) *and supported by said links*" in addition to, and distinct from, a central draft connection.

Clearly then, Lich has expressly provided, and claimed, the "other structure" for carrying the vertical shear load from the near end of unit 3 into unit 1.

(iii) Conclusion Re Lich

For the two foregoing reasons the applicant respectfully submits that (a) the Lich reference does not show the features it is said to show, and upon which the current rejections rely; and (b) the reference therefore does not establish grounds upon which to sustain the rejection of claim 1, or of any other claim presently pending in the case. In that light the applicant respectfully requests reconsideration of each of the current rejections, and allowance of the claims as presently amended.

Rejections under 35 USC: Motivation, Suggestion, or Incentive to Combine

(i) Lich and Ehrlich - Claims 48, 49, 51 - 52, 60, 61, 63, 64, 79, and 81 - 83

In the interest of brevity, the applicant repeats, and incorporates herein by reference the commentary made in the response to Office Action submitted November 12, 2003 in this matter with respect to the application of the three part test set forth in MPEP 2142, and with regard to lack of motivation, suggestion or incentive to combine the Lich and Ehrlich references.

In brief, Ehrlich teaches individual hybrid, single unit rail road cars that can be drawn, individually, by a highway tractor trailer rig (item 180, 182) or assembled into a train. Ehrlich even

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explicitly claims his releasable tongue connection knuckle coupler plug (see, e.g., Ehrlich claim 6), and the method for uncoupling the cars (see, e.g., Ehrlich claim 12).

Lich, by contrast, shows, describes, and claims, an articulated car with depending links and a central draft connection. It is abundantly clear that Lich's units are not intended to be taken apart on a day to day basis.

Lich and Ehrlich therefore teach, and claim, in opposite directions. Even if combination of the two references would result in a device having the features of the presently claimed invention, (which the applicant submits it would not, for the reasons stated above, if not others), the applicant respectfully submits that such opposed teaching negates the possibility of there being a suggestion, motivation, or incentive to combine the two references.

In addition, the applicant notes that the applicant does not bear a positive burden of showing that there is a lack of motivation, suggestion or incentive to combine the references. However, although such a showing is not necessary, it is sufficient to overcome the rejection. The applicant notes that, in contrast, the Commissioner does bear a positive burden to show, on the basis of objective evidence of record, grounds upon which to infer motivation, suggestion, or incentive to combine or amend.

The applicant respectfully submits that no such objective evidence of record has ever been cited in this application, or in its parent. As such, the applicant respectfully submits that prima facie grounds for rejection have not been established according to either the procedure set forth in MPEP 2142, or on the basis of the underlying case law.

For these reasons, quite independently of the reasons given above with regard to Lich alone, the applicant respectfully requests that the rejection of any claim herein under 35 USC 103 on the basis of a combination of Lich in view of Ehrlich be reconsidered, and those claims allowed.

(ii) Lich and Bock - Claims 14, 15, 17, 57, 59, 69 - 71, and 83

"The general concept of providing a three pack rail road car having a two truck middle unit and a pair of single truck end units connected at a cantilevered articulation to a train consist is well known in the art as illustrated by Bock et al., see fig. 2."

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The applicant respectfully disagrees.

(a) *"... well known"*

The applicant is claiming an articulated rail road freight car. As far as the applicant is aware, there is no objective evidence of record in this case of any freight car having a two truck middle unit and single truck end units. Therefore, the applicant respectfully submits that to suggest it is "well known" in the art is not accurate.

(b) No motivation to combine

The cited art is to be read as a whole. The applicant submits that it has not been shown, that there is any reason why a person skilled in the art, reviewing Bock, would be motivated not only to combine the references, but to combine them in such a way as to arrive at the present invention. Bock shows and describes light weight, single axle bogie passenger equipment, not freight equipment. There is no reason why a person skilled in the art would infer that Bock's lightweight passenger construction would be relevant to freight cars.

(c) *"to save weight"*

The applicant respectfully submits that there is a conceptual misunderstanding. An existing three pack articulated freight car may well weigh less than the presently claimed car. The present invention may actually result in a weight increase, not a reduction, for two reasons. First, the structure required for the cantilever may tend to be significantly more robust than that required for the simple support of adjacent articulated rail road car body units on a shared truck that is mounted centrally under the articulation, as in a conventional articulated car layout. Second, a car incorporating the present invention may tend to be longer than a car having symmetrically shared trucks, and may gain in overall weight simply by virtue of being longer.

That is to say, Bock notes the weight savings obtained by eliminating the single axle trucks of the adjoining rail car units nearest to the articulation. But that is not the starting point of the present invention, (or even, actually, of Bock, since he acknowledges that at least that much was known before his invention). The starting point of the present invention is the existing three-pack articulated rail road car, from which the weight of extra two axle trucks has already been saved, simply by virtue of using shared trucks located centrally under the articulation, rather than using a string of single unit cars coupled together.

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In that light, the applicant doubts the soundness of the suggested rationale in the office action, upon which the motivation to combine is apparently founded, and seeks re-consideration of any rejection based upon the combination of Lich and Bock.

6) Conclusion

In view of the foregoing arguments and claim amendments the applicant submits that the claims are in a condition to permit allowance. Therefore the applicant requests early and favourable disposition of this application.

Respectfully submitted,

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